

ULTRASONIC DIAGNOSTIC IMAGING SYSTEM WITH
AUTOMATIC CONTROL OF PENETRATION, RESOLUTION AND
FRAME RATE

5 Abstract of the disclosure:

10 An ultrasonic diagnostic imaging system and method are presented in
which the balance between image resolution and frame rate (Res/Speed) and the
balance between image resolution and penetration (Pen/Gen/Res) are
automatically adjusted in response to image content. A motion detector
analyzes the relative motion between successive images. If the motion content
is relatively high, the imaging parameters are changed in favor of relatively
greater frame rate and reduced resolution. A low motion content causes the
opposite adjustment. The electronic noise between successive images is also
15 computed with a relatively high noise content (low correlation) in the far field
resulting in an adjustment to penetration as by lowering the transmit frequency.
A relatively low noise content causes an adjustment in favor of increased
resolution.